Learning Theories and Principles in Dale's Cone of Experience

SAS #6

1. He was a US educationist who developed the famous Cone of experience.

A. Stephen Krashen
B. Lorin Anderson
C. Edgar Dale
D. Benjamin Bloom

2. The cone of experience is a visual model composed of 11 levels starting from abstract experiences at the bottom of the cone then it becomes more and more concrete as it reaches the peak of the cone.

TRUE

~~FALSE~~

3. In this level, the learner learned by doing things by him/herself. This level serves as the foundation of learning.

A. Study Trips
B. Contrived Experiences
~~C. Direct Purposeful Experiences~~
D. Dramatized Experiences

4. Dale theorized that learners retain more information by what they do than what they only heard.

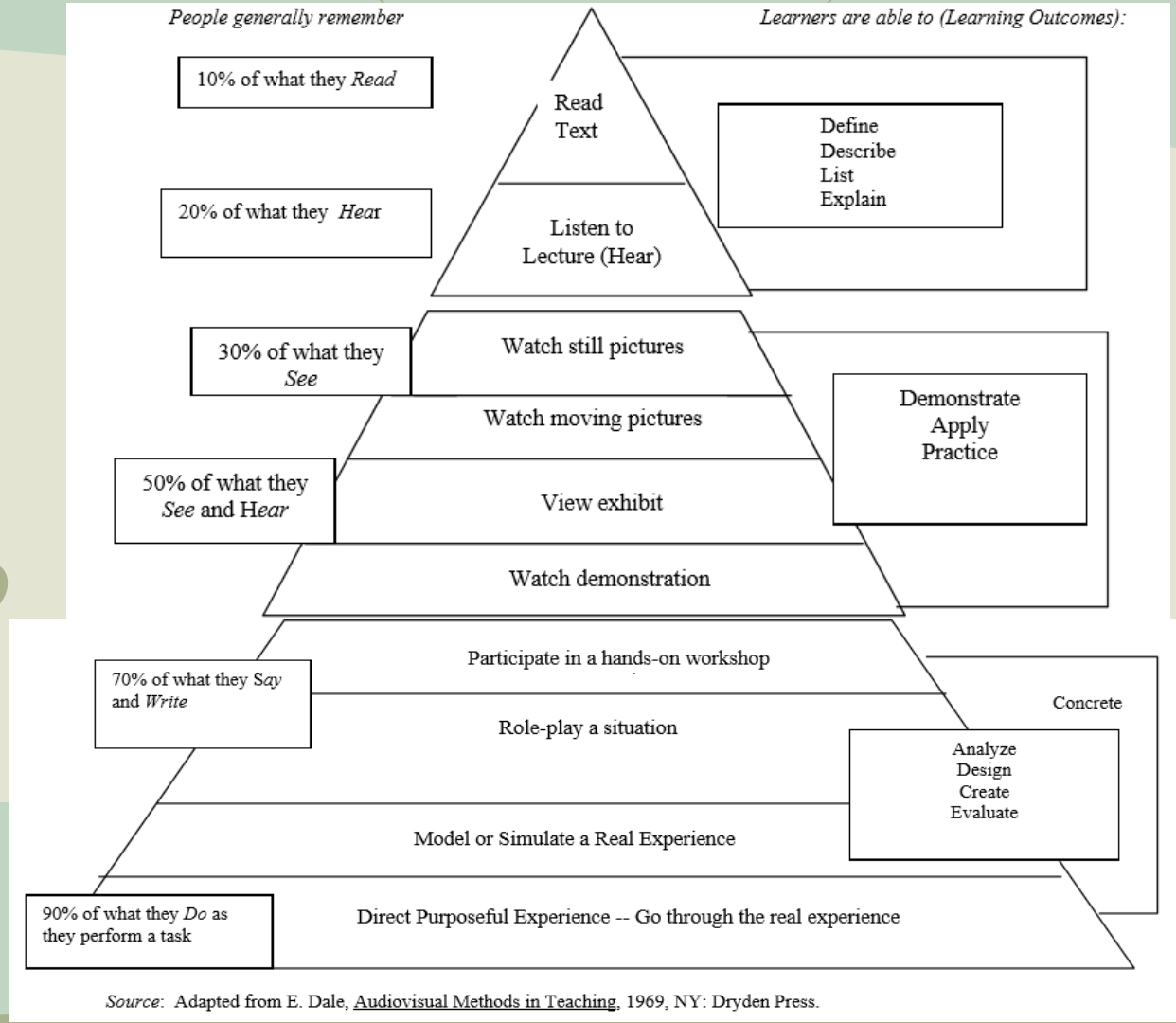
~~TRUE~~

FALSE

5. Contrived experience is the exact reality.

TRUE

~~FALSE~~



Source: Adapted from E. Dale, Audiovisual Methods in Teaching, 1969, NY: Dryden Press.

Cone of Experienc

By Edgar Dale

10% of what they *read*

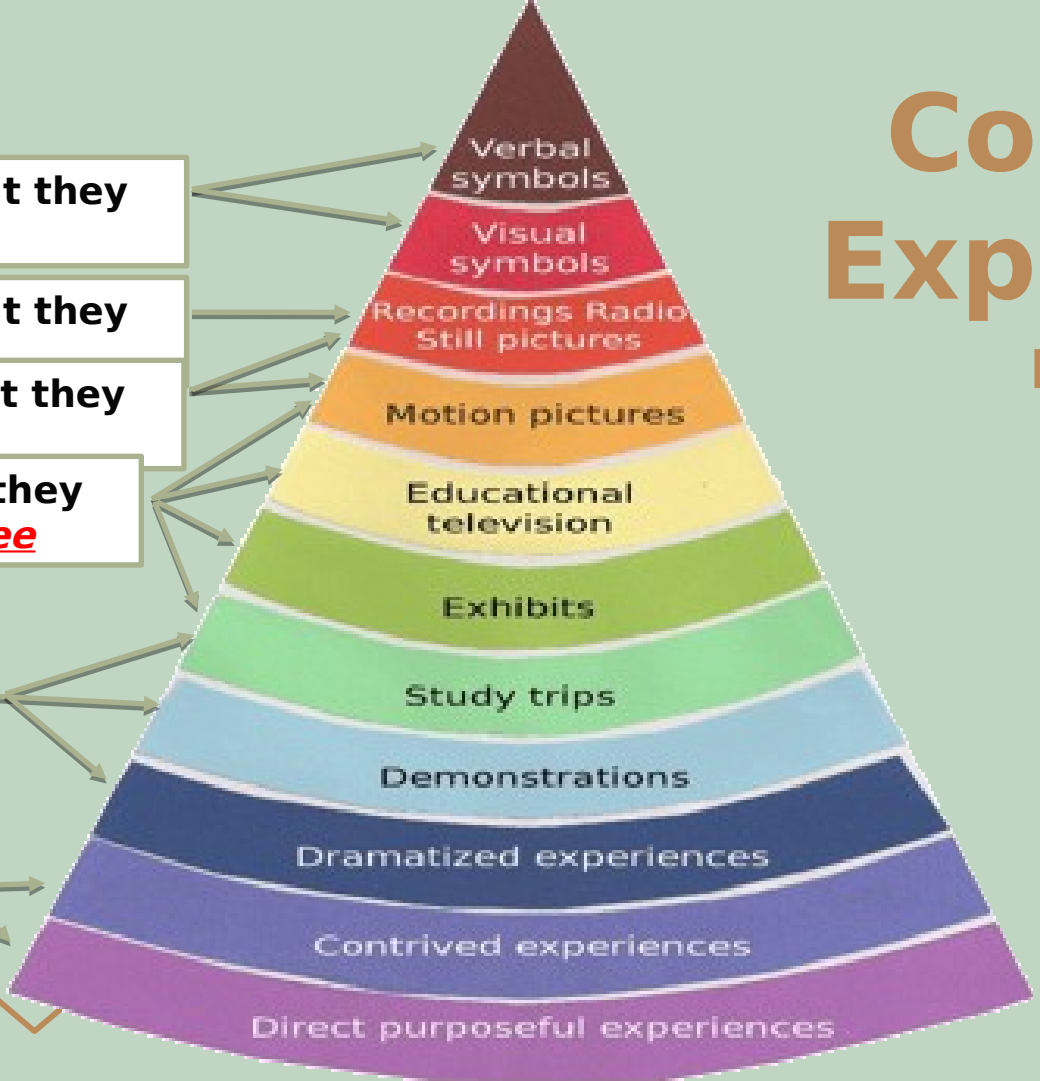
20% of what they *hear*

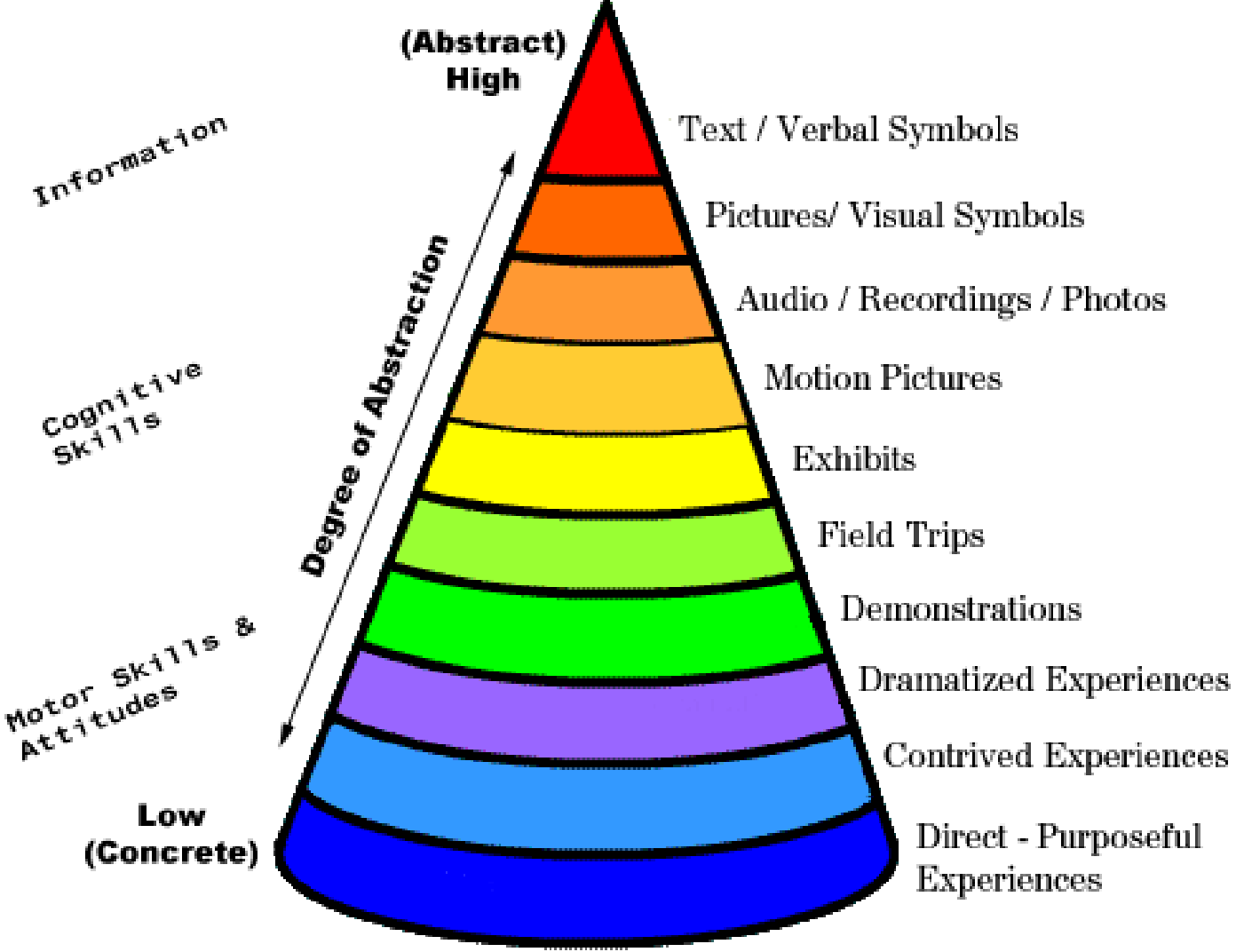
30% of what they *see*

50% of what they *hear and see*

70% of what they *say and write*

90% of what they *say as they do*




(Abstract)
High
Information
Cognitive Skills
Degree of Abstraction
Motor Skills & Attitudes
Low
(Concrete)
Text / Verbal Symbols
Pictures/ Visual Symbols
Audio / Recordings / Photos
Motion Pictures
Exhibits
Field Trips
Demonstrations
Dramatized Experiences
Contrived Experiences
Direct - Purposeful Experiences

What is the Cone of Experience?

What are the sensory aids in the Cone o Experience?

What are its implication in teaching?

Edgar Dale

an American educator who developed the *Cone of Experience*, also known as the **Learning Pyramid**. He made several contributions to audio and visual instruction, including a methodology for analyzing the content of motion pictures

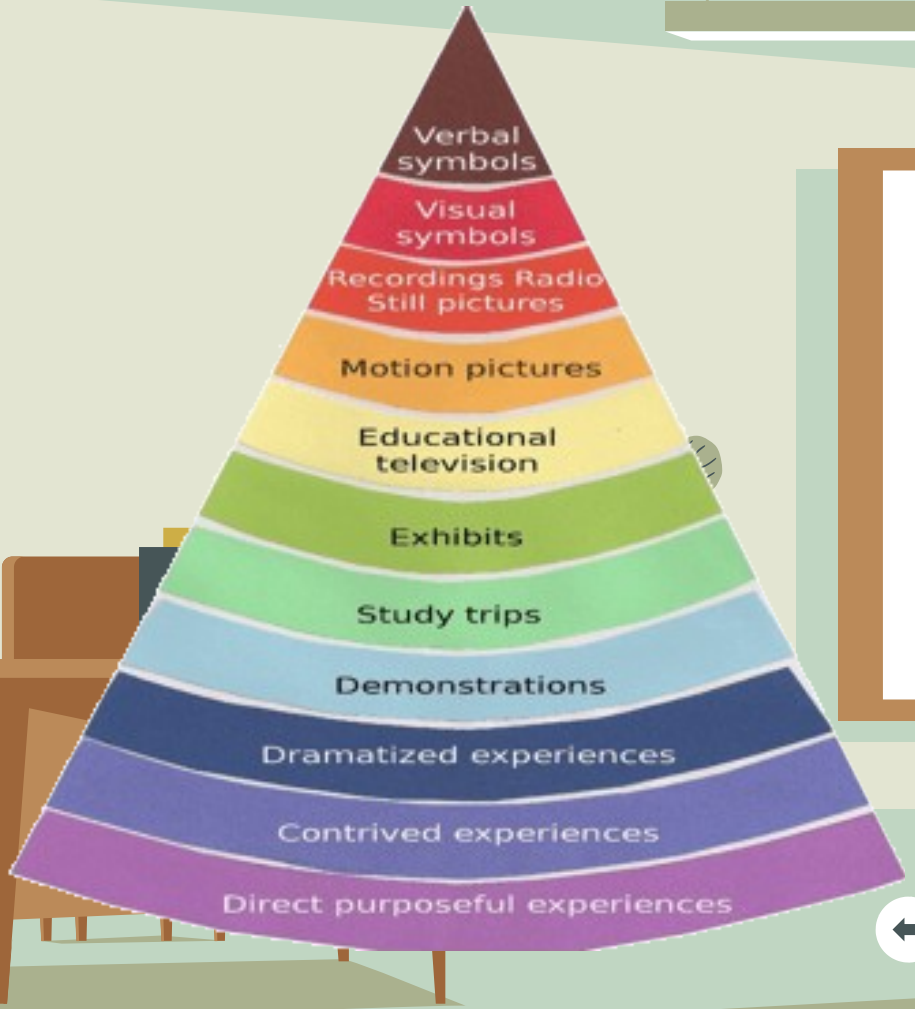
Dale’s Cone of Experience

-is a model that incorporates several theories related to instructional design and learning processes. During the 1960s, Edgar Dale theorized ***that learners retain more information by what they “do” as opposed to what is “heard”, “read” or “observed”.*** His research led to the development of the Cone of Experience. Today, this “learning by doing” has become known as “experiential learning” or “action learning”.

Concrete

Abstract

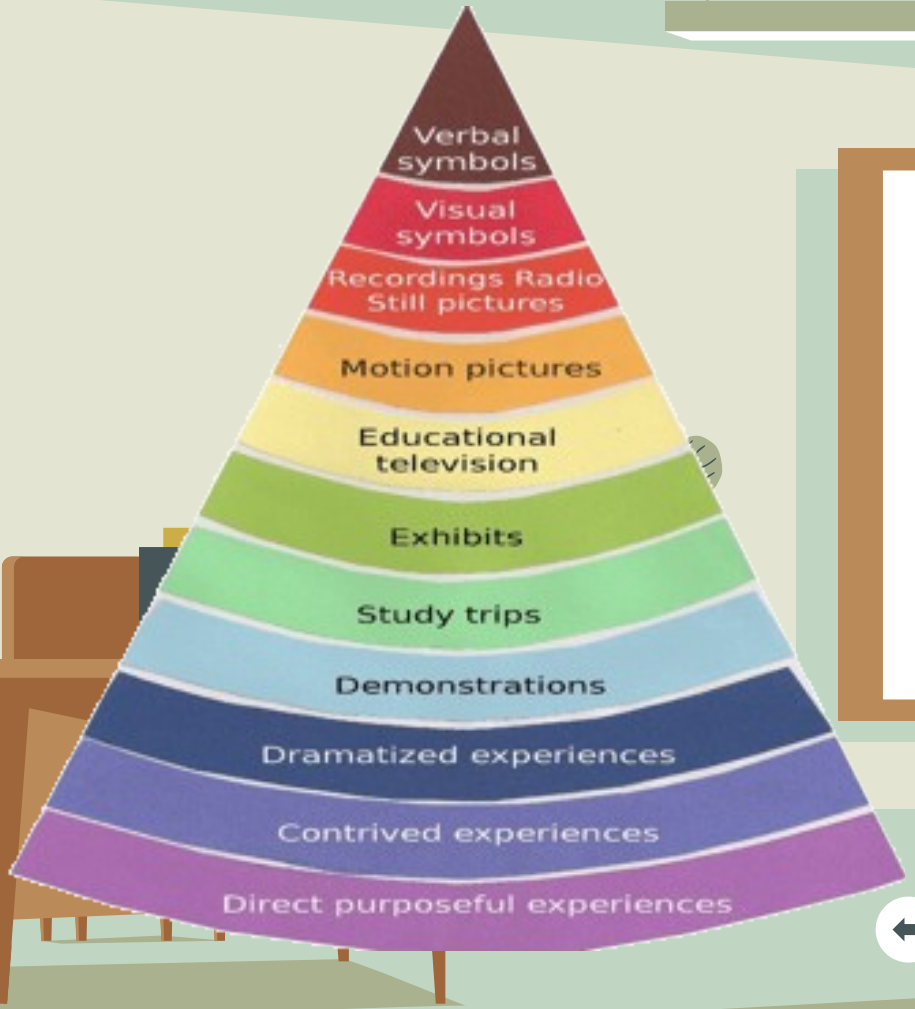
EARTH



01

Direct and Purposeful Experience

- **Direct, First hand Experience**
- **Have a direct participation in the outcome**
- **Use of all our senses**



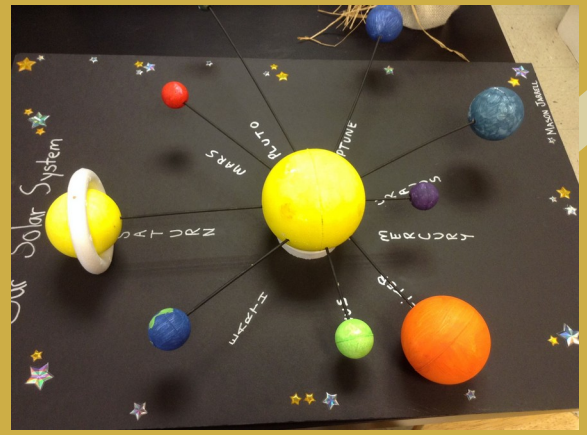
02

Contrived Experience

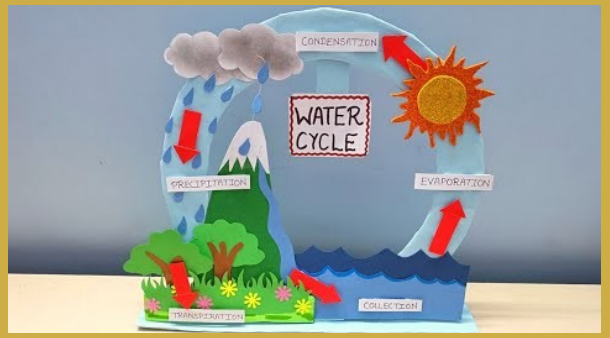
- **Models and mock- ups**
- **Editing of reality**
- **Necessary when real experience cannot be used or are too complicated**

Model

is a reproduction of a real thing in a small scale, or a large scale, or exact size- but made of synthetic materials.



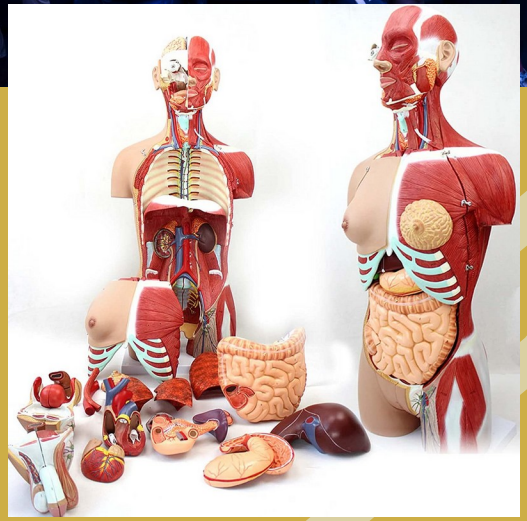
It is a substitute for a real thing which may or may not be operational.

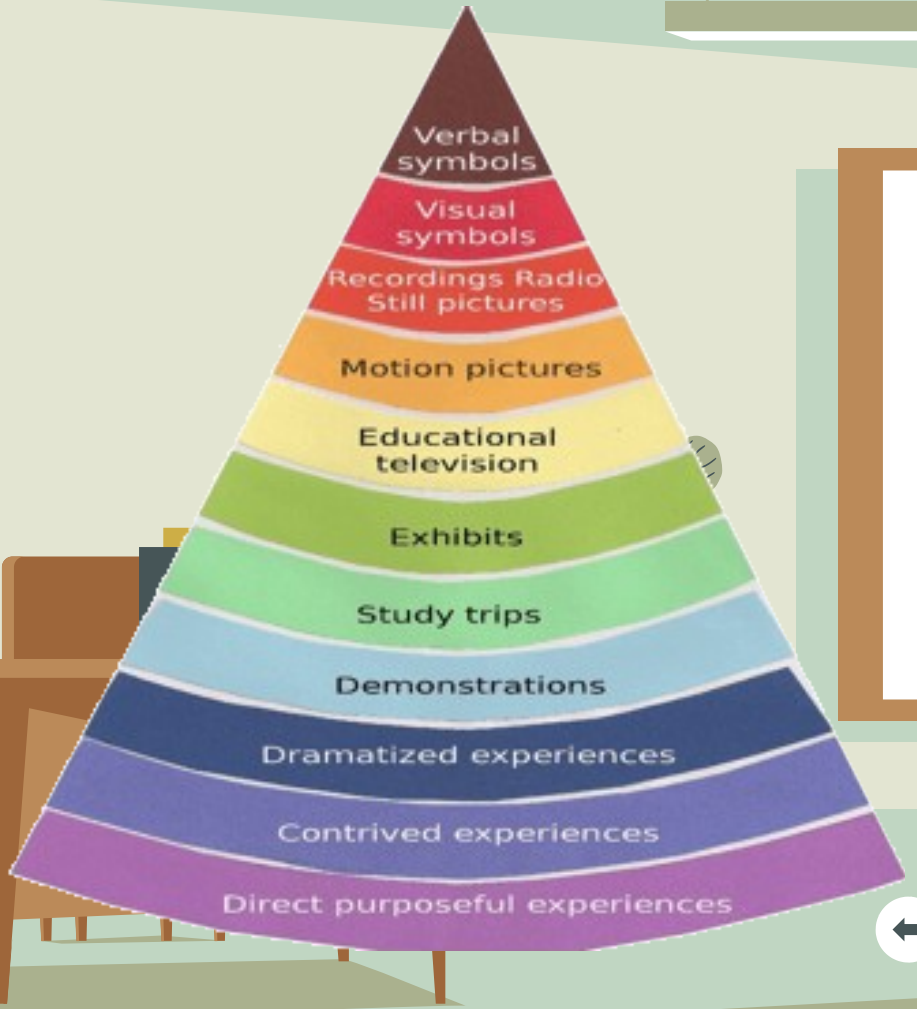


Mock-up

is an arrangement of a real device or associated devices, displayed in such a way that representation of reality is created.

A mock up is a special model where the parts of a model are singled out, heightened and magnified in order to focus on that part of process under study.





03

Dramatized Experience

- Reconstructed experiences
- Can be used to simplify an event or idea to its most important parts
- Divided into two categories:
  - **Acting** - actual participation (more concrete)
  - **Observing** - watching a dramatization take place (more abstract)

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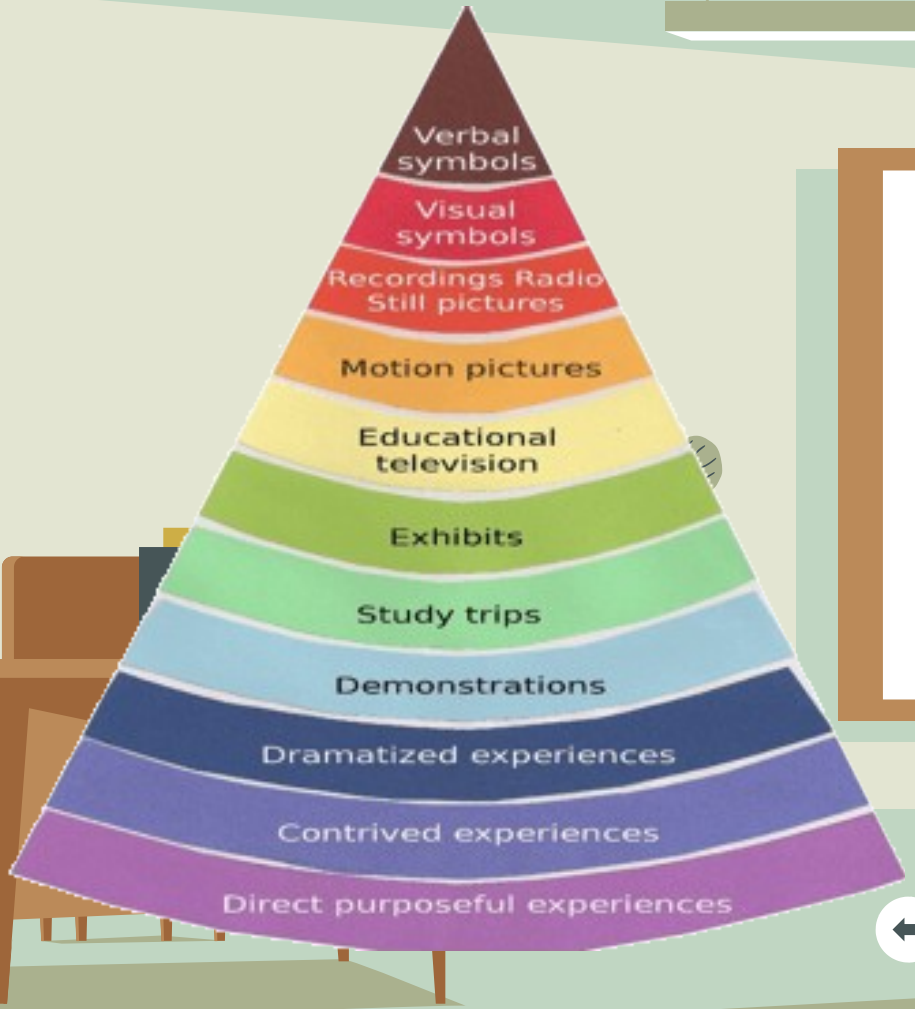
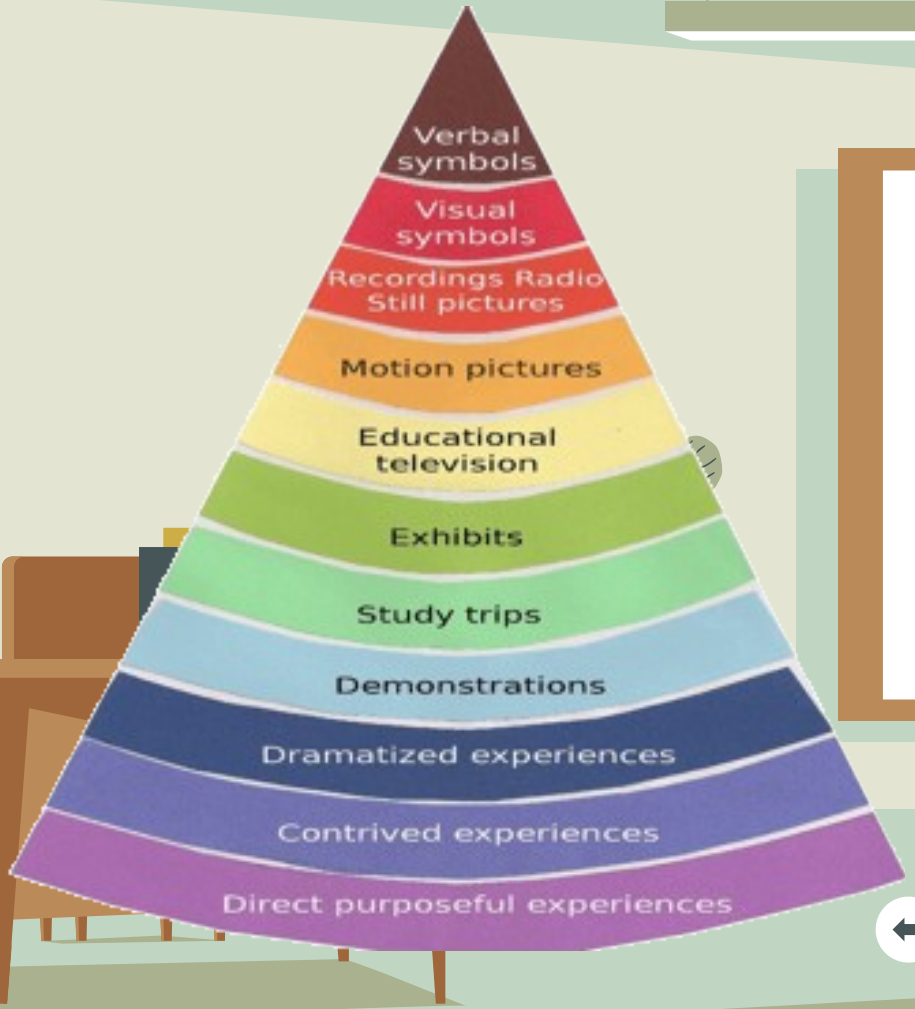


04

Demonstration

- Visualized explanation of an important fact, idea, or process

- Shows how certain things are done

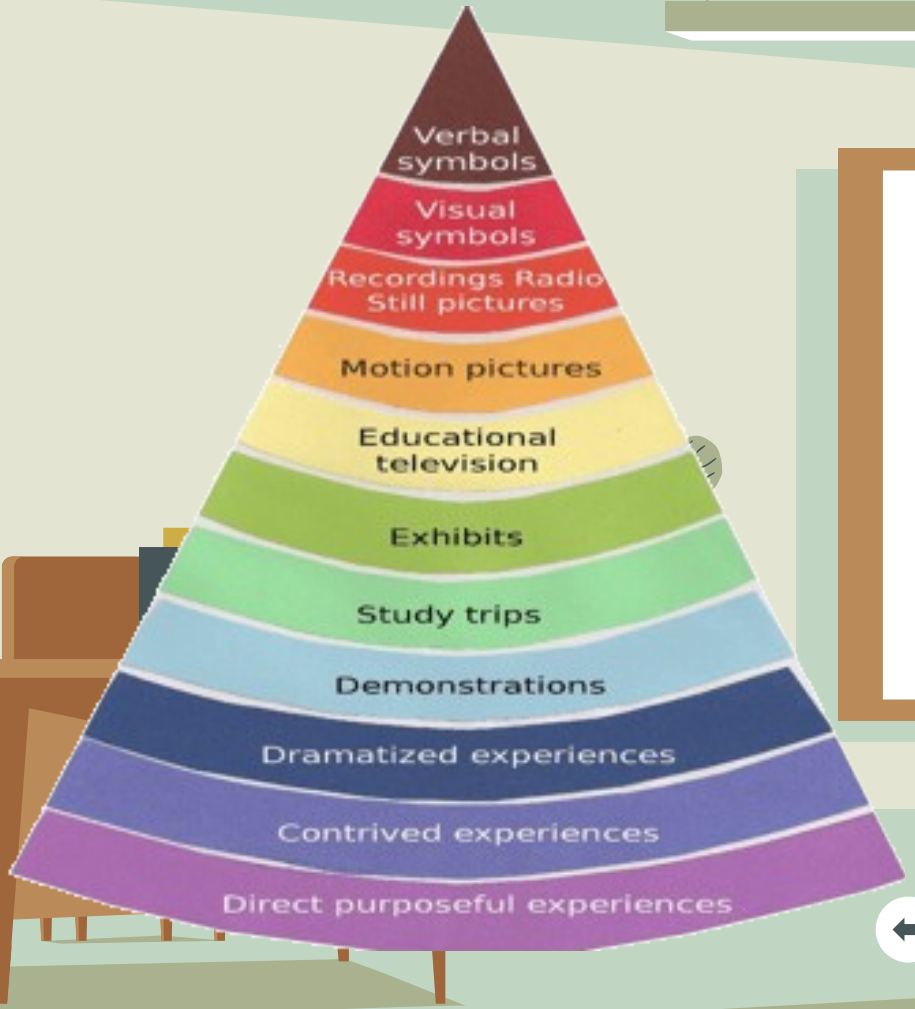


05

Field Trip

- Watch people do things in real situations

- Observe an event that is unavailable in the classroom


Verbal symbols
Visual symbols
Recordings Radio Still pictures
Motion pictures
Educational television
Exhibits
Study trips
Demonstrations
Dramatized experiences
Contrived experiences
Direct purposeful experiences

06

Exhibit

- Something seen by a spectator
- experiences that is “for your eyes”

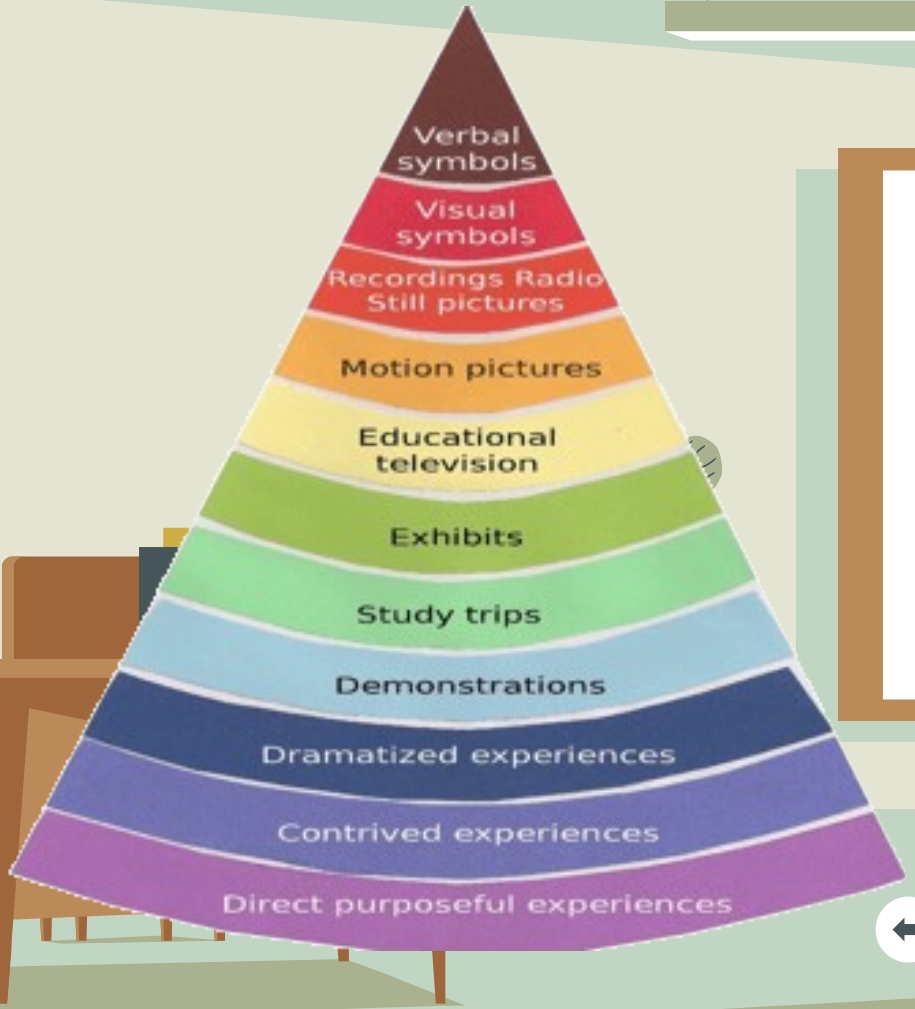
Two types:

- Ready made
- Home-made

KINDNESS
KINDNESS

Food Groups
Food Groups
1) Energy giving foods -
They mainly give us
energy to do different
activities
Eg Rice, bread,
2) Protective foods -
They
protect us
Eg fruits and
3) Body building foods -
They help
Energy giving Food
Protective Food
Body-building Food

WELCOME



07

Educational Television and Motion Pictures

television

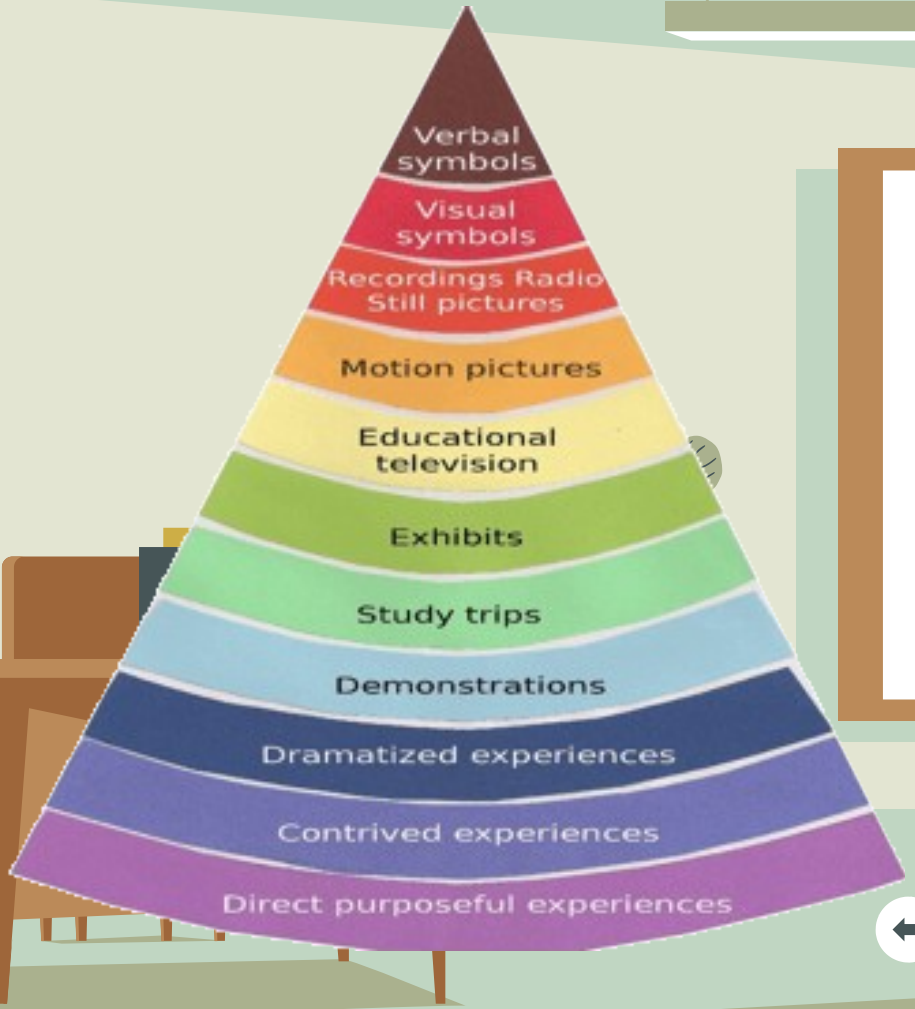
- Bring immediate interaction with events from around the world

- Edit an event to create clearer understanding than if experienced actual event first hand

Motion Picture

- Can omit unnecessary or unimportant material
- Used to slow down a fast process
- Viewing, seeing and hearing experience
- Can re-create events with simplistic drama that even slower students can grasp

Science_Solar System
Fill in the blanks below
[ ] is the sixth planet from the Sun and the second largest planet in the Solar System, after Jupiter. [ ] is a gas giant with an average radius about nine times that of Earth.
SAMSUNG



08

Recordings, Radio and Still Pictures

- Can often be understood by those who cannot read

- Helpful to students who cannot deal with the motion or pace of a real event or television

Guidelines for Demo:
1 Teacher's Personalit
2. Preparation / Ma
3. Mastery
4. Delivery of the
5 Class Manage
6 Assessment
7 Integration

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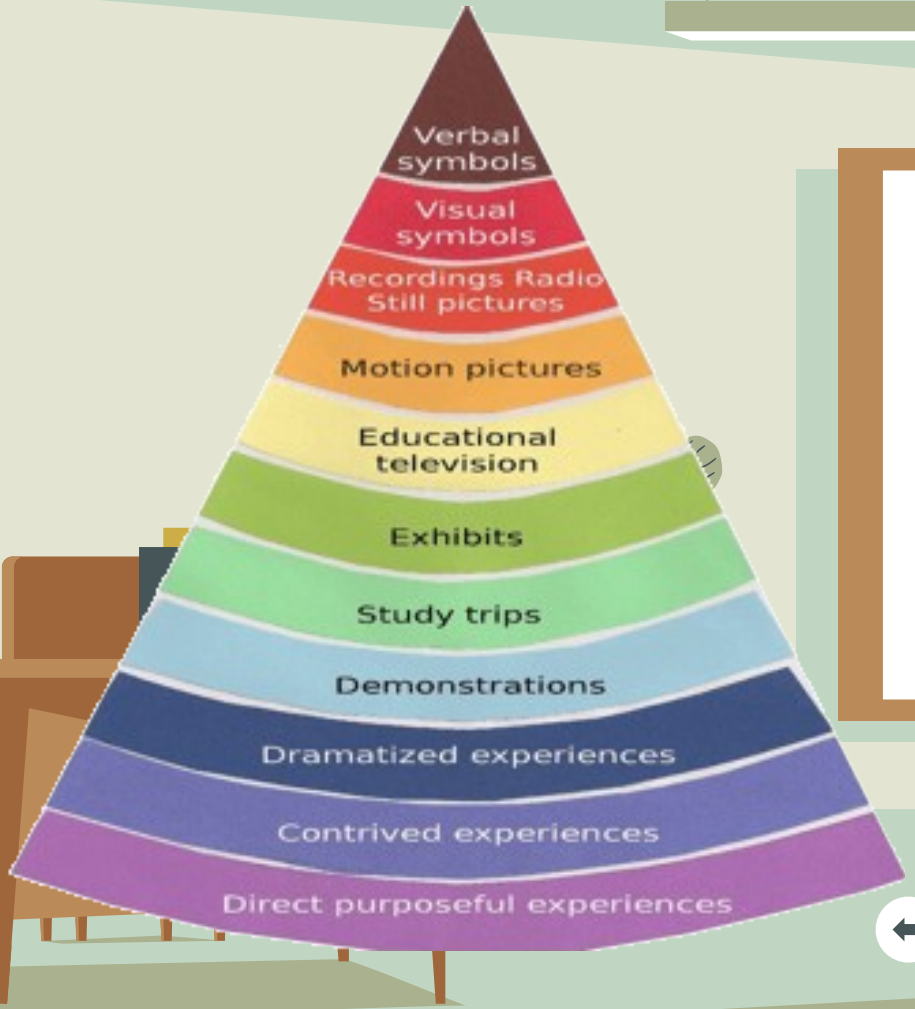
09

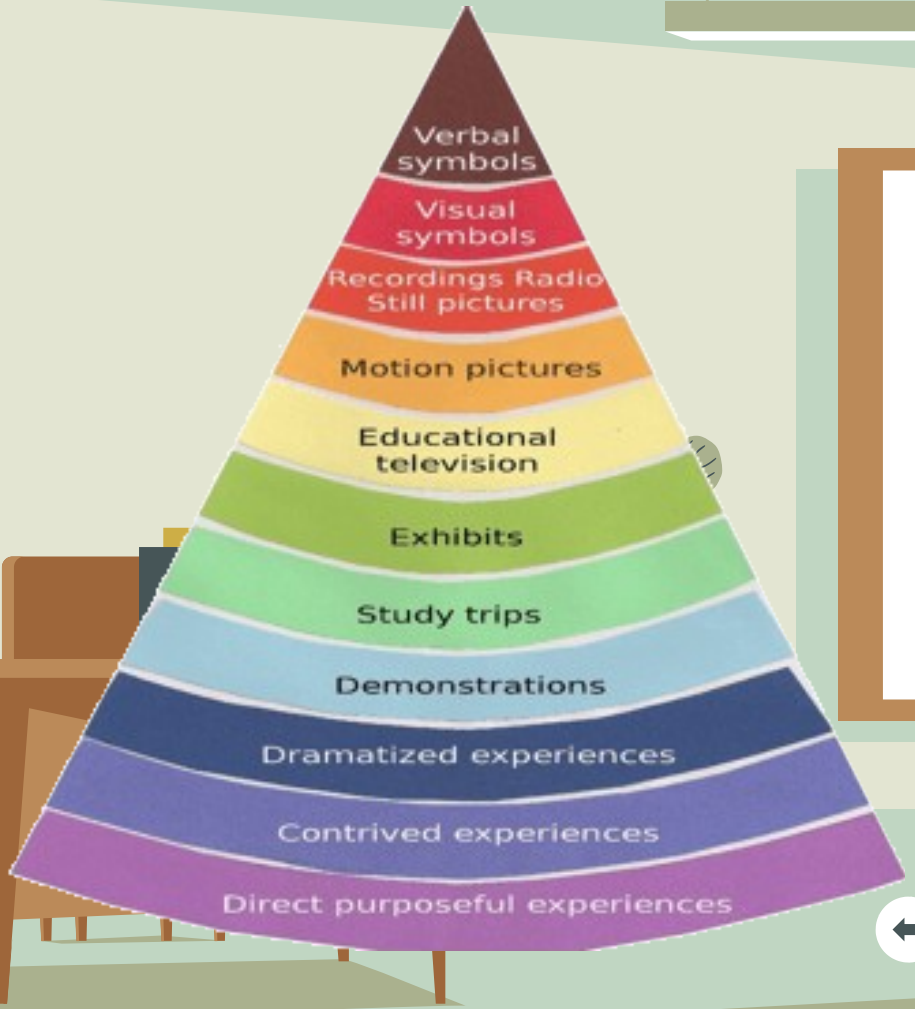
Visual Symbols



- No longer involves reproducing real situations
- Chalkboard and overhead projector the most widely used media
- Help students see an idea, event, or process

A- Apple
B- Boy
C- Cat

tion: Yellow
A H1 N1 Virus



10

Text/ Verbal Symbols

Two types:

- Written words- more abstract

- Spoken words- less abstract

Symbols are...

Arbitrary - they have no direct relationship to the objects or ideas they represent

Ambiguous - they have several possible meanings

Abstract - they are not material or physical; they can only represent objects and ideas

Dales’ cone of experience is a tool to help instructors make decisions about resources and activities. The instructor can ask the following:

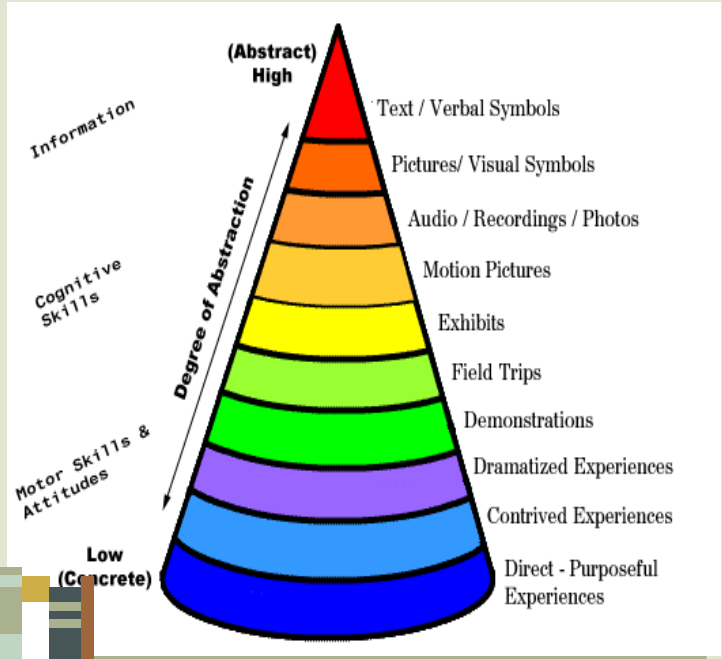
- Where will the student’s experience with this instructional resource fit on the cone? How far is it removed from real-life?

- What kind of learning experience do you want to provide in the classroom?

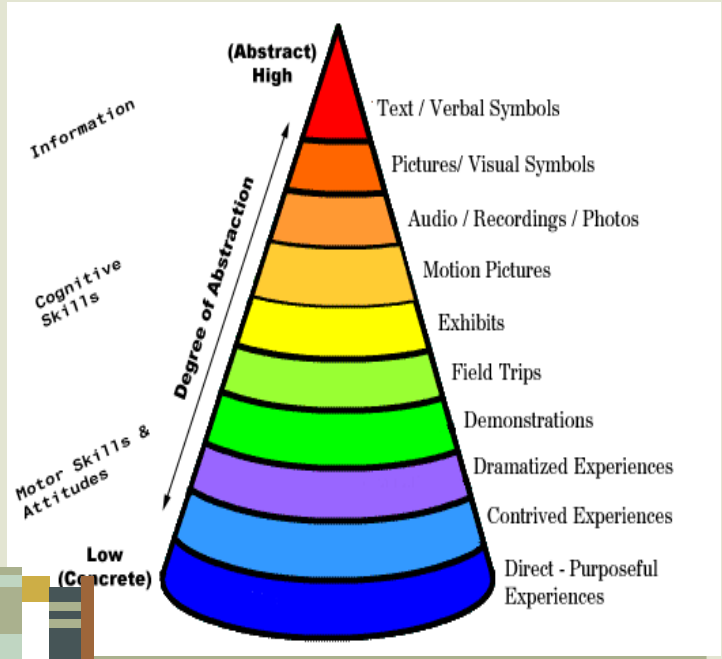
o How does this instructional resource augment the information supplied by the textbook?

o What and how many senses can students use to learn this instructional material?

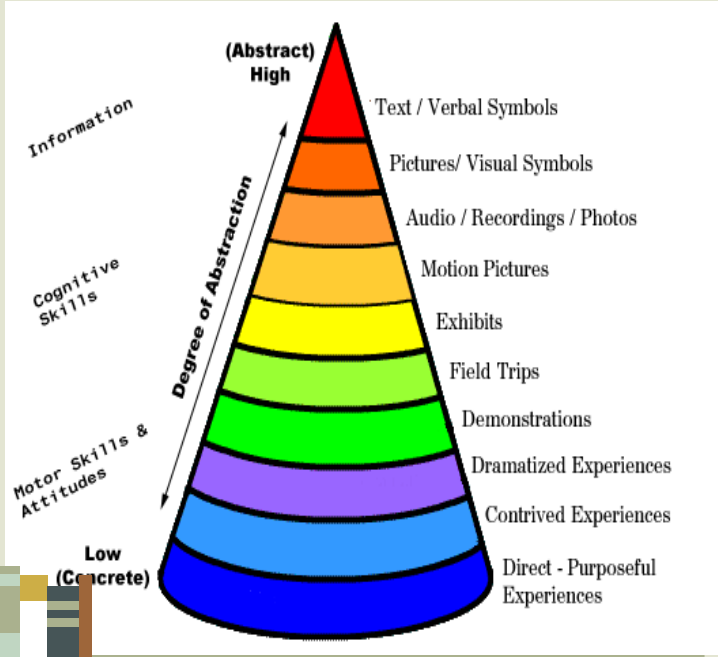
o Does the instructional material enhance learning?



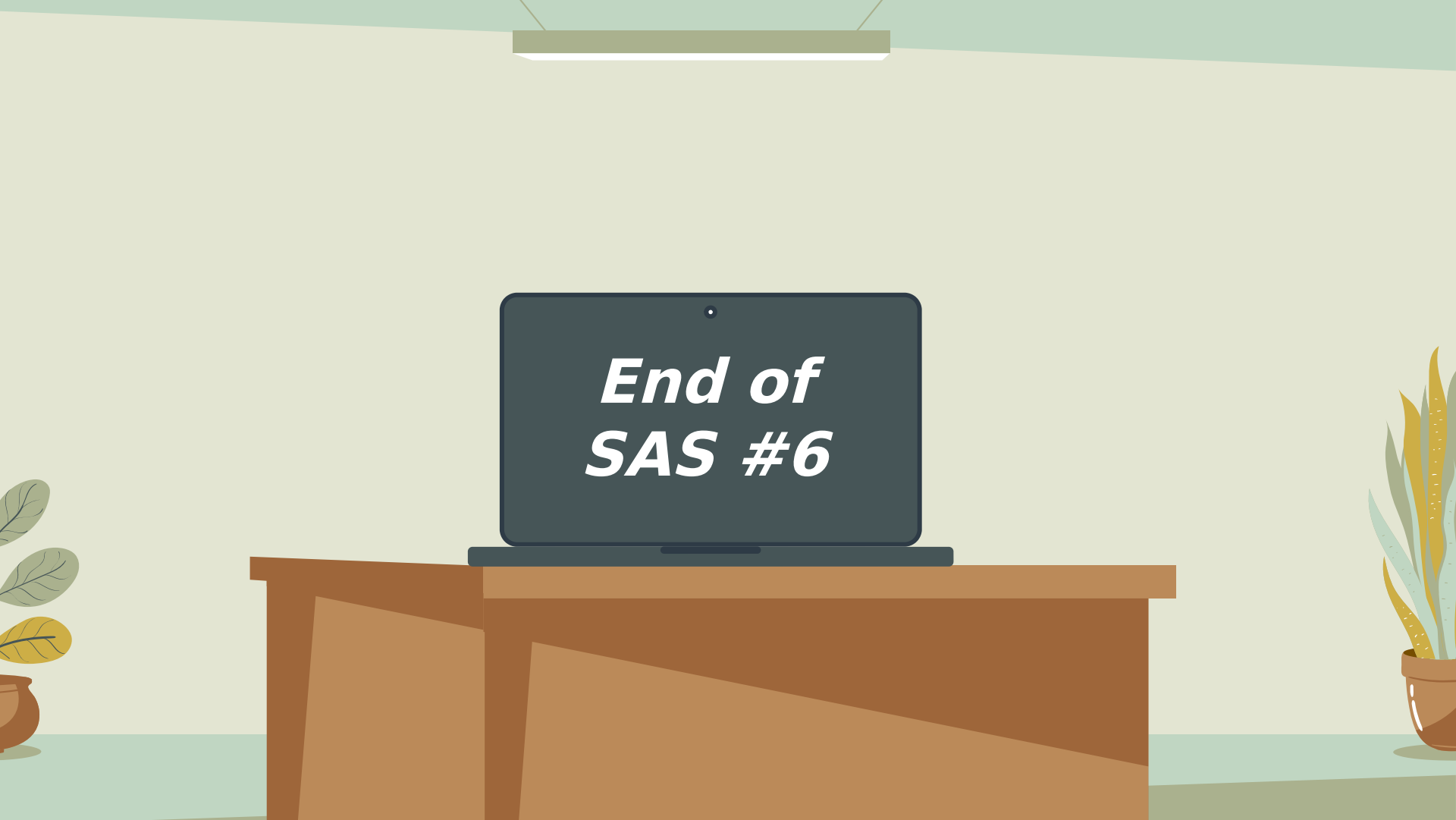
Dale’s cone of experience is a visual model that is composed of different stages starting from concrete experiences at the bottom of the cone then it becomes more and more abstract as it reach the peak of the cone.



The arrangement in the cone is not based on its difficulty but rather based on abstraction and on the number of senses involved. The experiences in each stages can be mixed and are interrelated that fosters more meaningful learning.



According to the principle, the more senses that are involved in learning, the more and the better the learning will be but it does not mean that concrete experience is the only effective experience that educators should use in t rring knowledge to th ner.


End of
SAS #6

Exit Ticket:

Think of topics where you can utilize the levels in the Cone of Experience. (One each per level)

Example:
The Solar System- Contrived Experiences

Technology, Pedagogy and Content Knowledge (TPACK)

SAS #7

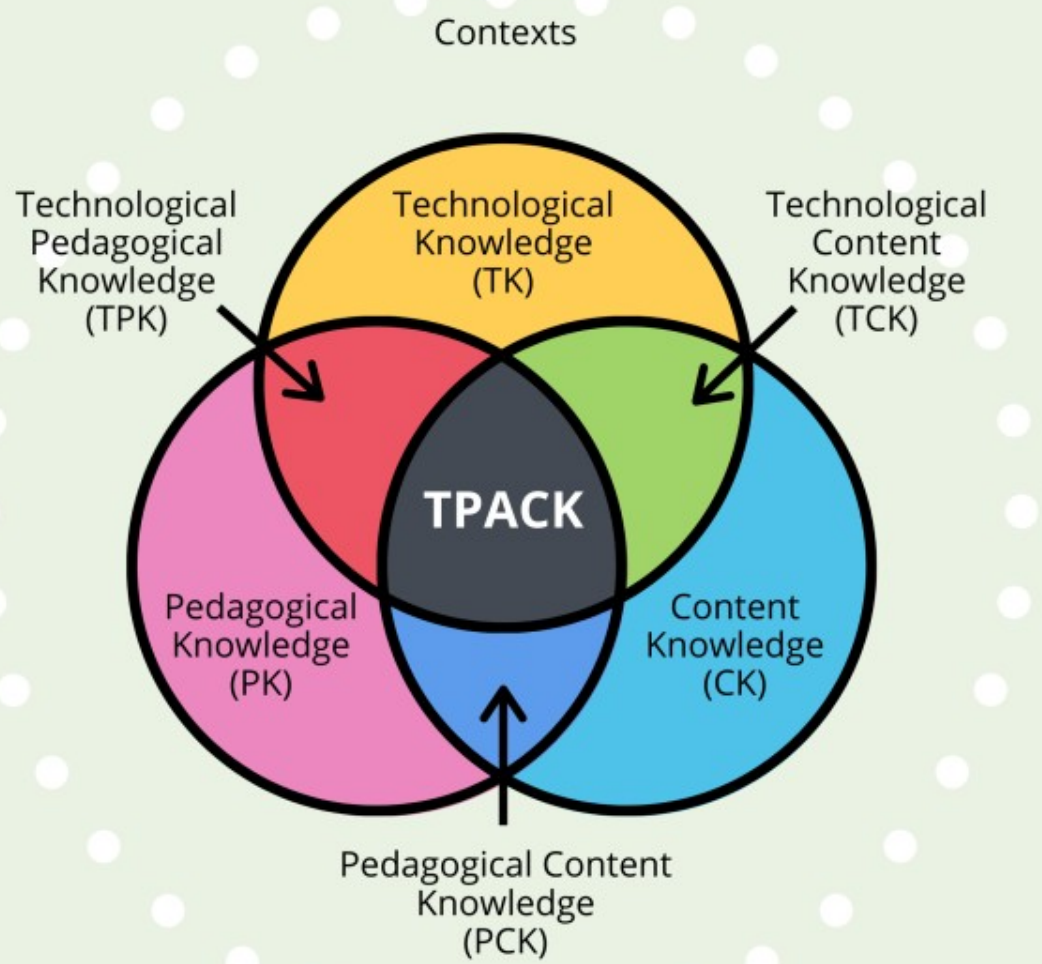
TPACK

It is called ***technological pedagogical content knowledge*** (or TPACK for short), that describes the kinds of knowledge *needed by a teacher for effective technology integration*. The TPACK framework emphasizes how the connections among teachers' understanding of content, pedagogy, and technology interact with one another to produce effective teaching.

TPACK

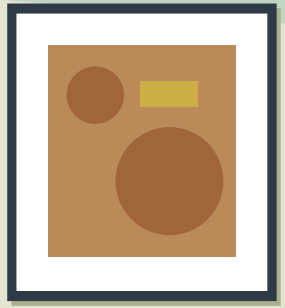
TPACK framework suggests that teachers need to have *deep understandings* of each of the above components of knowledge in order to orchestrate and coordinate technology, pedagogy, and content into teaching.

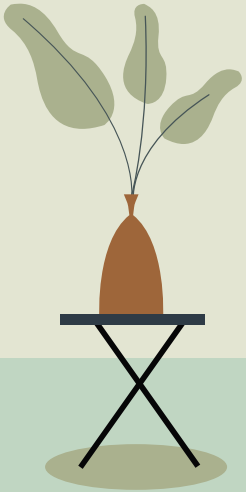
THE TPACK MODEL



@edtechclass

Three major knowledge components form the foundation of the TPACK framework as follows:





Content knowledge (CK)

refers to **any subject-matter knowledge** that a teacher is responsible for teaching.

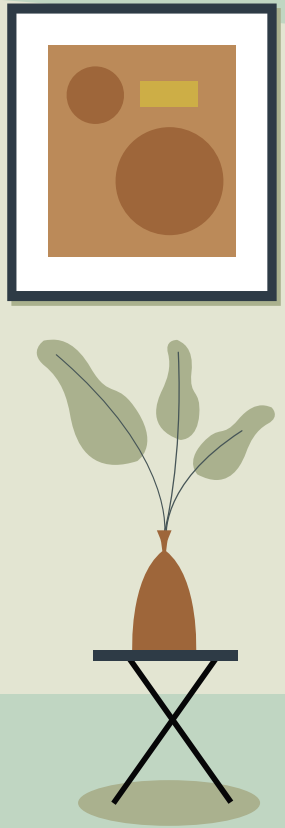
Pedagogical knowledge (PK)

refers to teacher knowledge about a ***variety of instructional practices, strategies, and methods to promote students' learning***

Technology knowledge (TK)

refers to teacher knowledge about traditional and new technologies that can be integrated into curriculum.

Four components *in the TPACK framework, address how these three bodies of knowledge interact, constrain, and afford each other as follows:*



Technological Content Knowledge (TCK)

refers to knowledge of the reciprocal relationship between **technology and content**. Disciplinary knowledge is often defined and constrained by technologies and their

Pedagogical Content Knowledge (PCK)

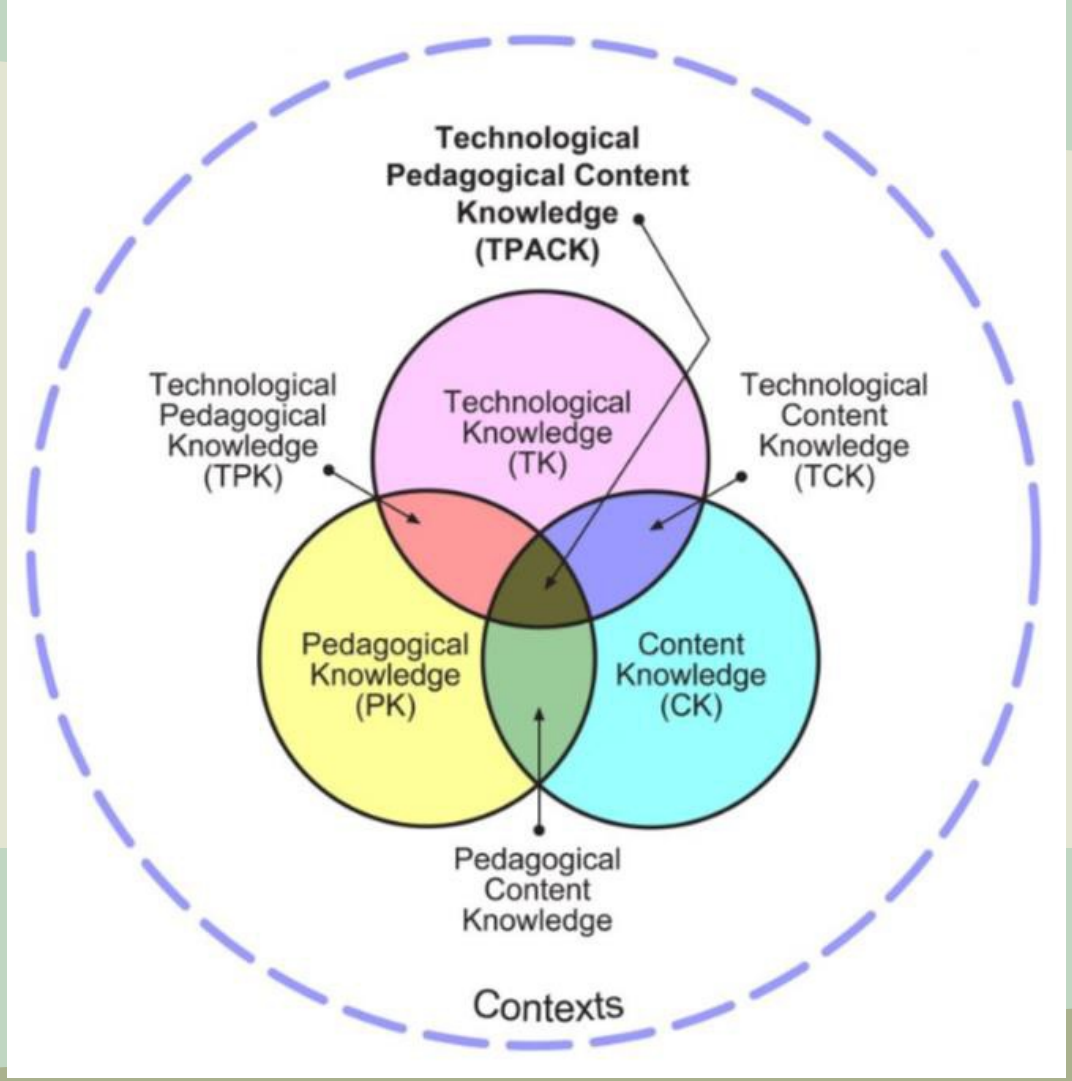
is to Shulman’s (1986) notion of “an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners,

Technological Pedagogical Knowledge (TPK)

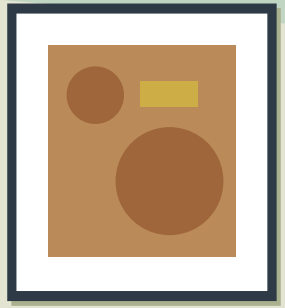
refers to an understanding of technology can constrain and afford specific pedagogical practices.

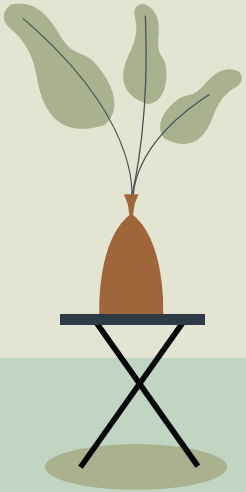
Technological Pedagogical Content Knowledge (TPACK)

refers to knowledge about the complex relations among technology, pedagogy, and content that enable teachers to develop appropriate and context-specific teaching strategies.


Technological Pedagogical Content Knowledge (TPACK)
Technological Pedagogical Knowledge (TPK)
Technological Knowledge (TK)
Technological Content Knowledge (TCK)
Pedagogical Knowledge (PK)
Content Knowledge (CK)
Pedagogical Content Knowledge
Contexts

Shulman’s (1986) model of Pedagogical Content Knowledge Similar frameworks:

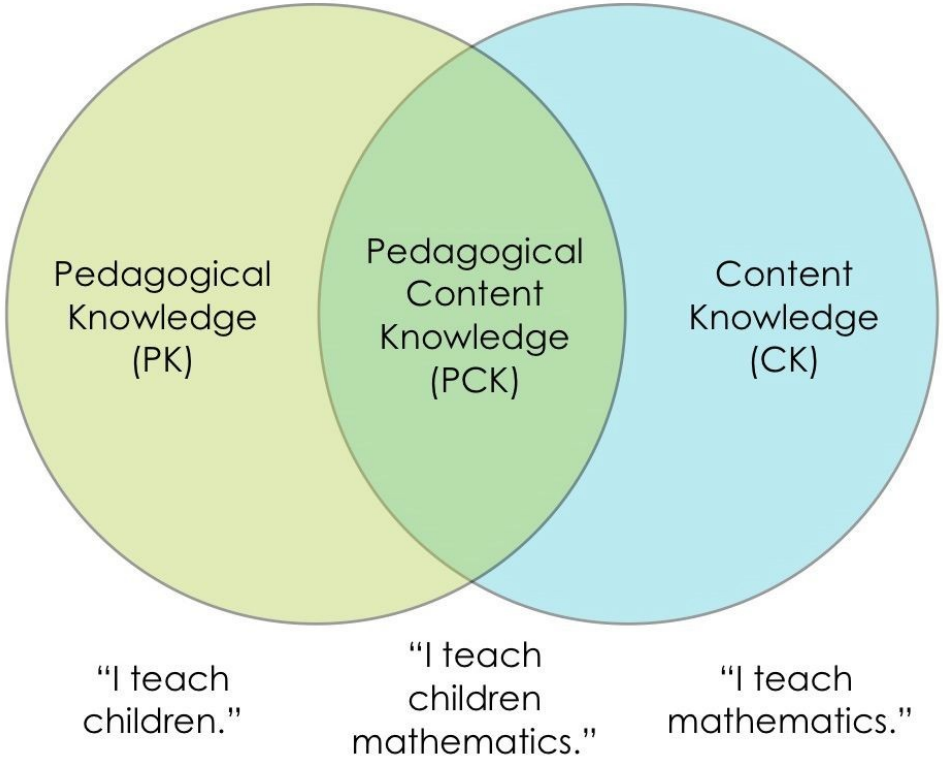




Lee S. Shulman

Pedagogical content knowledge (PCK) was first introduced by Shulman in the 80’s.

It is defined as the integration of *pedagogy and content* which basically covers the ‘what’ and ‘how’ of teaching.


Pedagogical Knowledge (PK)
Pedagogical Content Knowledge (PCK)
Content Knowledge (CK)
"I teach children."
"I teach children mathematics."
"I teach mathematics."

Shulman’s (1986) model of Pedagogical Content Knowledge Similar frameworks:

- **ICT-Related PCK** differs from TPACK in that it conceptualizes the *integration of technology into teaching* as happening within the realm of PCK, and requiring additional types of knowledge within PCK, whereas the TPACK framework considers technology knowledge *as its own body of knowledge.*

- **<u>Technological Content Knowledge</u>** is a theoretical framework defined by an emphasis on the *“total intersection”* between technology and content.

- **Knowledge of Educational Technology** is different from the TPACK framework, in that the TPACK framework emphasizes the interactions between content, pedagogy, and technology—treating technology knowledge as separate but interacting with all other forms of teacher knowledge.

- **<u>Electronic Pedagogical Content Knowledge (ePCK)</u>** consists of knowledge that teachers must possess in order to successfully integrate technology into their classrooms.

- **Technological Pedagogical Content Knowledge - Web (TPCK-W)** consists of knowledge of TPACK components content and pedagogy, and in place of general technology, the World Wide Web.

1. What does the TPACK model aim to integrate?

2. Give an example on how to incorporate the TPACK Framework in your classroom.

Activity Time!!!

End of
SAS #7